

Duration	Assignment name/& brief description of main deliverables/outputs	Name of Client & Country of Assignment
Feb-22 ongoing	<p><b>Construction Supervision of Aitanit WWTP</b></p> <p>The purpose of this Subcontract is to engage ELARD to assist Chemonics in rapidly and responsively procuring technical assistance as needed for the oversight of construction activities services of the Aitanit Wastewater Treatment Plant and sludge management rehabilitation and upgrade.</p>	Chemonics-Community Support Program CSP
May-20 Sep-21	<p><b>Feasibility Study and Design for the Rehabilitation and Upgrade of Aitanit WWTP</b></p> <p>Aaitanit WWTP treats the 5000 m<sup>3</sup>/d of domestic wastewater generated from the villages of Aitanit, Baaloul, Qaraoun and Machghara in west Beqaa, serving approximately 38,000 people. Since its construction the plant is operated satisfactorily by The Union of Municipalities of Qaraoun. The proposed intervention would improve the sludge treatment to produce stabilized biosolids suitable for land application. The project would entail the installation of sludge thickening, dewatering and stabilization system along with its related equipment and ancillaries, covering the digesters and the drying beds, Provision of on-site laboratory, replacing the digesters recirculation and mixing pumps, and the rehabilitation of structural/electrical/mechanical components as were proposed by the approved Prefeasibility report prepared by ELARD for this purpose.</p>	Chemonics-Community Support Program CSP
Dec-20 Mar-21	<p><b>Feasibility Study and EIA for the Design and Construction of a WWTP in North Baalbeck</b></p> <p><b>Feasibility Study:</b></p> <ul style="list-style-type: none"> <li>• Technical Feasibility: <ul style="list-style-type: none"> <li>○ Assessment of wastewater flows (quality and quantity)</li> <li>○ Assessment of alternatives</li> <li>○ Process Selection General Arrangement (GA) Plan and process Flow diagram (PFD)</li> <li>○ Effluent disposal</li> <li>○ Sludge utilization and disposal</li> <li>○ Preliminary Cost Estimate of the WWTP</li> </ul> </li> <li>• Socio-economic Feasibility: This type of feasibility will describe the current social, political and economic situation of the areas that the intervention will serve. It will forecast, based on the findings, the effect of the project on these aspects once implemented.</li> <li>• Administrative feasibility: This section will identify the official responsible entity that will take over the project once it is implemented and the entity that will be responsible for its operation and maintenance. In this chapter, the geographic boundaries of the project along with the area served should be well defined.</li> <li>• Sustainability Requirement: This section will evaluate the sustainability of the project, evaluating available revenue to support the operations and maintenance.</li> </ul>	KREDO / UNICEF

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	<ul style="list-style-type: none"> <li>Financial Feasibility and Cost Benefit Analysis: This section will emphasize the project cost estimates, both Capital Investment and Operation and Maintenance costs.</li> </ul> <p><b>Environmental Impact Assessment:</b></p> <ul style="list-style-type: none"> <li>EIA Scoping</li> <li>Public Consultation and Participation</li> <li>Environmental Baseline Survey</li> <li>Analysis of Alternatives, Impact Assessment and Development of the EMP</li> </ul>	
Sep-19 Feb-20	<p><b>Wastewater Treatment Plant</b></p> <ul style="list-style-type: none"> <li>Design</li> <li>Leveling of existing Ground</li> <li>Fill around Ponds</li> <li>Geomembrane polypropylene flexible, homogeneous, black colour of a 1MM thickness, Certified Asqual</li> <li>Geotextile 300 grams unwoven, untreated anti-uv, realized fiber-based rot-proof, 100% propylene</li> <li>Supply and Installation of Gravels rolled 8-16 for filters</li> <li>Supply and Installation of Sand Filtering 0-3 for filters</li> <li>Concrete plots for maintaining of PVC pipes at the               <ul style="list-style-type: none"> <li>bottom of the pond and at the top of the filters</li> </ul> </li> <li>Construction of slab for technical room</li> <li>Sampling Manhole. Sleeves, vents and Openings</li> <li>Concrete pit for screen installation + soakaway for water evacuation + concrete platform for screening Bin</li> <li>As built drawings</li> <li>Pumping and Mechanical Works</li> </ul>	Chateau Kefraya
Sep-18 Aug-21	<p><b>Consultant for Assessing, Designing and Supervising Rehabilitation and Upgrade of a Water Supply Systems in Tyre District, South Lebanon</b></p> <ul style="list-style-type: none"> <li>Conducting an assessment of the existing Water Network between Ouadi Jilo and Maarake;</li> <li>Conducting an assessment of the pumping station in Batoulay;</li> <li>Designing of the transmission line from Ouadi Jilo to Maarake;</li> <li>Preparation of the technical designing of the suggested rehabilitation of the pumping station;</li> <li>Drawing up of the Tender Documents for the Execution of the Works;</li> <li>Assisting the Contracting Authority, during the Tendering Period and the Tender's Evaluation;</li> <li>Supervising the construction activities (civil, electro-mechanical and hydraulic works);</li> <li>Producing the Final Report and the Operation &amp; Maintenance Manual;</li> <li>Conducting and/or supervise the training to the operators at the pumping station</li> </ul>	Action Against Hunger (ACF)
Sep-18 Sep-21	<p><b>Consultant for Assessing, Designing and Supervising Rehabilitation and Upgrade of a Water Supply Systems in Tyre District, South Lebanon</b></p> <ul style="list-style-type: none"> <li>Baseline Assessment of the existing pumping station Nr.2 in Ouadi Jilo and Preliminary Revision of the existing</li> </ul>	Care International

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	Design aiming to reassess and identify rehabilitation/upgrade requirements; <ul style="list-style-type: none"> <li>• Review and test existing electromechanical equipment, valves, connections &amp; fittings and water hammer system within the pumping station and identify replacement/rehabilitation needs; and identify chlorination system needs;</li> </ul>	
Apr-17 Apr-20	<b>Technical Assistance for the Design and Procurement of Sewage Network and WWTP In Laboue, Lebanon</b> The update of the <b>design of a wastewater treatment and collection network</b> which included: <ul style="list-style-type: none"> <li>• Detailed design studies for the rehabilitation, extension and new sewerage infrastructure works, aiming to full coverage and safe collection and removal of wastewaters from residential areas. It includes a detailed topographical survey.</li> <li>• Tender Documents for the procurement of sewerage works, based on FIDIC CoC for Construction, 1st Edition 1999 (Red Book), including Instructions to Tenderers, Conditions of Contract, Technical Specifications, Bills of Quantities and Design Drawings.</li> <li>• Procurement of the sewerage works through invitation to tender, tender evaluation, contract negotiations and contract award.</li> <li>• Preparation of a DBO contract design and study for the WWTP in order to construct a new wastewater</li> </ul>	Council for Development and Reconstruction (CDR)
May-19 Dec-19	<b>National Water Sector Strategy Update - Irrigation Sector</b> The scope of work of the Consultant is to study the irrigation sector and conclude the prioritized action plans in line with the Ministry's strategic objectives, in the following Mouhafazat: <ul style="list-style-type: none"> <li>• Aakkar and North Lebanon,</li> <li>• Mount Lebanon, and</li> <li>• Beqaa and Baalbek-Hermel.</li> </ul> The scope of work entails the following actions: <ul style="list-style-type: none"> <li>- Data collection of executed, ongoing and planned projects related to irrigation through the past 10 years (infrastructure, water resources, storage structures..)</li> <li>- Data collection about irrigation schemes ( agricultural and irrigated areas, agricultural types, water resources, network)</li> <li>- Assessment of the water balance of schemes by the estimation of water supply and irrigation requirements,</li> </ul> <ul style="list-style-type: none"> <li>▪ Recommending the priority projects per scheme and the Capital Investment till the horizon of 2035.</li> </ul>	KREDO / UNICEF (Funding Agency)
Apr-18 Jul-21	<b>Constructed Wetlands Design and Quality Control</b> <ul style="list-style-type: none"> <li>▪ <u>Roum village:</u>              Preparing the design and bid documents for the construction of the Constructed Wetland (Reed Bed) for the major part of the village, which includes:             <ul style="list-style-type: none"> <li>➤ Design and construction quality control of a Constructed Wetland (Reed Bed) that will serve around 1,500 individuals distributed over around 470 houses occupied by 3 to 4 persons per unit.</li> </ul> </li> </ul>	DAI

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	<ul style="list-style-type: none"> <li>▪ <u>Aayoun El Ghezlane village:</u> Preparing the design and bid documents for the construction of the Constructed Wetland (Reed Bed) for the whole village, which includes:               <ul style="list-style-type: none"> <li>➢ Design and construction quality control of a Constructed Wetland (Reed Bed) that will serve around 300 individuals distributed over around 48 houses occupied by around 6 persons per unit.</li> </ul> </li> </ul>	
Mar-18 Aug-20	<p><b>Design and Construction Quality Control of Wastewater Networks, Rehabilitation of a Constructed Wetland, and Rehabilitation of Wastewater Treatment Plants</b></p> <ul style="list-style-type: none"> <li>✓ <u>Aayoun El Ghezlane village:</u> Preparing the design and bid documents of the sewage network, which includes:               <ul style="list-style-type: none"> <li>➢ Design of a sewage network of approximately 2,800 m</li> </ul> </li> <li>✓ <u>Joubb Jannine village:</u> Preparing the design and bid documents for the extension of the sewage network, which includes:               <ul style="list-style-type: none"> <li>➢ Design of a sewage lines of approximately 3,000 m</li> </ul> </li> <li>✓ <u>Khirbet Qanafar village:</u> Preparing the design and bid documents for the extension of the sewage network of the village which includes:               <ul style="list-style-type: none"> <li>➢ Design of a sewage lines of approximately 2,500 m</li> </ul> </li> </ul> <p>Preparing the design and bid documents for the rehabilitation of the Constructed Wetland, in Khirbet Qanafar village.</p> <ul style="list-style-type: none"> <li>➢ Preparing the design and bid documents for the mechanical and civil works rehabilitation of three wastewater treatment plants in Mrousti, Jbaa &amp; El Moukhtara/Boutme.</li> </ul>	DAI
Feb-18 Aug-19	<p><b>Irrigation Master Plan for the Beqaa Water Establishment (BWE) No. PUR-LWP-17-0171</b></p> <ul style="list-style-type: none"> <li>• Conduct Initial Investigations and Schedule Review</li> <li>• Review and Update Existing Agricultural and Irrigation Information</li> <li>• Update and Complete an irrigation Assets survey</li> <li>• Estimate Irrigation Water demand and Water Balances</li> <li>• Recommend Specific Improvements, Take-Over Action Plans and Estimated Capital Costs</li> <li>• Develop and Asses Strategic Alternatives for BWE Irrigation Water Sector Management</li> <li>• Prepare Irrigation Water Master Plan and Conduct Reviews</li> </ul>	DAI
Jun-15 Jun-16	<p><b>Design and Supervisions' Site Visits of Infrastructure, Water and Sewage Projects on Long Term Agreement (LTA) basis</b></p> <p>The project conceived to design and supervise infrastructure, water and sewage projects through one or more of the following tasks depending on the needs of the village:</p> <ul style="list-style-type: none"> <li>• Rehabilitation of wells when needed</li> <li>• Rehabilitation of roads</li> <li>• Design of water and/ or sewage network</li> <li>• Supervision on the construction works</li> </ul>	United Nations Development Programme (UNDP)

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	<p>This mission entails:</p> <ul style="list-style-type: none"> <li>• Inception report that includes the tasks to be done as well as the detailed workplan</li> <li>• Site visits, a field survey and a desk study for the specified villages along with site visit reports</li> <li>• A detailed design of the planned interventions in every village based on water needs' assessment</li> <li>• Tender documents based on the detailed design</li> <li>• Tendering Assistance</li> <li>• Supervision of the Works' Execution based on onsite inspection, communication and reporting</li> </ul>	
<p>Aug-17 Jun-19</p>	<p><b>Design of Water Supply Systems and Supervision of Works' Execution in El-Fouar Bent Jbeyl (South Lebanon).</b> The project conceived to design and supervise infrastructure, water and sewage projects through one or more of the following tasks depending on the needs of the village:</p> <ul style="list-style-type: none"> <li>• Rehabilitation of wells when needed</li> <li>• Rehabilitation of roads</li> <li>• Design of water and/ or sewage network</li> <li>• Supervision on the construction works</li> </ul> <p>This mission entails:</p> <ul style="list-style-type: none"> <li>• Inception report that includes the tasks to be done as well as the detailed workplan</li> <li>• Site visits, a field survey and a desk study for the specified villages along with site visit reports</li> <li>• A detailed design of the planned interventions in every village based on water needs' assessment</li> <li>• Tender documents based on the detailed design</li> <li>• Tendering Assistance</li> <li>• Supervision of the Works' Execution based on onsite inspection, communication and reporting</li> </ul>	<p>Comitato Internazionale Per Lo Sviluppo Dei Popoli (CISP)</p>
<p>Oct-17 Oct-18</p>	<p><b>Projects Outside of Demonstration Area: Upgrade of Potable Water Facilities in Al Aayoun, Rachaine and Rahbeh villages</b></p> <p><u>Al Aayoun village:</u> Preparing the design and bid documents for the development, equipping, and upgrading of an existing well, which includes:</p> <ul style="list-style-type: none"> <li>➤ Connection of the well located to the existing reservoir (around 150 m).</li> <li>➤ Rehabilitation or replacement of the existing reservoir.</li> </ul> <p>✓ <u>Rachaine village:</u> Preparing the design and bid documents for the construction and equipping of a new pumping station to replace the existing pumping station which includes:</p> <ul style="list-style-type: none"> <li>➤ Connection of the Pumping Station located to the existing reservoir (around 350 m).</li> <li>➤ Rehabilitation of the existing reservoir.</li> </ul>	<p>LWP-DAI</p>

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	<ul style="list-style-type: none"> <li>➤ The construction of a water supply line from a tie-in connection on the main Rachaine spring line to the proposed pumping station (around 100m).</li> <li>✓ <u>Rahbeh village:</u> Preparing the design and bid documents for the development, equipping, and upgrading of an existing well which includes:               <ul style="list-style-type: none"> <li>➤ Connection of the well to the existing 1,000 m<sup>3</sup> reservoir (around 650 m).</li> </ul> </li> </ul>	
Jan-16 Jun-19	<p><b>Design of Water Facilities and Supervision of the Works' Execution in Nabatieh District - South Lebanon</b> Design and Construction Supervision of Water Supply works in Kfar Fila, Kfar Roummame and Maifadoun in Nabatieh Cazam including:</p> <ul style="list-style-type: none"> <li>• Borehole drilling and relevant ancillary equipment</li> <li>• Construction of Pumping Stations;</li> <li>• Construction of regional Water Storage Tanks;</li> <li>• Forcemain to the new and the existing Water Storage Tank;</li> <li>• Main distribution line to connect the Water Storage Tank to the water distribution network</li> </ul>	Comitato Internazionale Per Lo Sviluppo Dei Popoli (CISP)
Apr-16 Feb-17	<p><b>Feasibility Assessment and Design for the Upgrade of Irrigation Networks in North Lebanon and The Beqaa</b></p> <ul style="list-style-type: none"> <li>• Assess the condition of existing irrigation networks</li> <li>• bills of quantities and cost-estimates for their rehabilitation</li> <li>• Determine the baseline conditions in the respective regions and accordingly prioritize the networks that need to be upgraded</li> <li>• Prepare the design drawings, including sections and elevations.</li> <li>• Prepare tender documents and technical specifications.</li> </ul>	United Nations Development Programme (UNDP)
Jun-16 Feb-17	<p><b>Assessment of River Gauging Stations in Lebanon</b></p> <ul style="list-style-type: none"> <li>• Assess the status of the 71 installed surface gauging stations as well as the 90 predefined measurement locations and propose new locations for additional gauging stations among the predefined measurement locations along the Lebanese rivers and their main tributaries.</li> <li>• This consultancy entailed:               <ul style="list-style-type: none"> <li>– Collection of all the necessary data regarding the location of the 71 existing surface gauging stations as well as the locations of the 90 predefined measurement sites, identification of the type of existing measurement stations, the brands, the capacity, and the date of installation and identification of potential locations for new gauging stations;</li> <li>– Field investigation for the 71 surface gauging stations and to the 90 predefined measurement locations in order to identify their physical status as well as their operational conditions;</li> <li>– Organization of all survey results in a user-friendly, GIS-supported database;</li> </ul> </li> </ul>	DAI – LEBANON WATER PROJECT

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	<ul style="list-style-type: none"> <li>- Classification of all the validated sites and their attributes in the datasheet and then uploaded and integrated into a Geographic Information System (GIS) georeferenced using both the stereographic projection corrected to Lebanon and the WGS 84 and thus to correspond with the requirements of the LRA;</li> <li>- Assessment of available and collected data upon completion of the data collection and field validation.</li> <li>• The assessment covered the following:               <ul style="list-style-type: none"> <li>- Evaluation of the suitability of the sites;</li> <li>- Suitability and condition of the equipment;</li> <li>- Analysis of the historical data;</li> <li>- Coverage of the network;</li> <li>- Suitability of the current software used for data collection and management;</li> <li>- Assess the capacity of existing staff and eventual needs for capacity building and training;</li> <li>- Assess the need for expansion of the gauging network cover locations that used to host stations before the civil war or where water courses or springs gauging is deemed necessary.</li> </ul> </li> <li>• The Assessment Report included:               <ul style="list-style-type: none"> <li>- GIS database for the gauging stations and measurements points;</li> <li>- Results of the findings from the data collection and the site inspection to each existing gauging station and assess its suitability in obtaining reliable data;</li> <li>- Recommendations of upgrades needed as well as requirements, corrective measures, and recommended upgrades with estimated costs to meet LRA and LWP requirements;</li> <li>- Identification and location of proposed new gauging stations, to ensure proper coverage of all the rivers courses and potentially major streams;</li> <li>- Conceptual design for the preparation works required for the installation of the gauging device in each station;</li> <li>- Technical specifications and cost estimation for the construction/rehabilitation of the gauging station along with the monitoring equipment to be installed in each station, taking into consideration the newly acquired equipment;</li> <li>- Detail procedures for the setup of the equipment and flow measurement procedures for initial calibration system;</li> <li>- An operational and maintenance manual to ensure the continuous acquisition of reliable data;</li> <li>- Advice on need to upgrade existing software used by LRA;</li> </ul> </li> </ul>	

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	<ul style="list-style-type: none"> <li>- Advice on need for capacity building for LRA Staff related to software upgrade and data acquisition, transmission and keeping.</li> </ul>	
Jun-16 Nov-16	<p><b>Assessment of Small Wastewater Treatment Plants in Lebanon</b></p> <ul style="list-style-type: none"> <li>• Collection of baseline information and regulatory requirements</li> <li>• Field visits to assess the performance as well as the general physical, environmental conditions of the plants</li> <li>• Suggesting mitigation measures</li> <li>• Preparing cost estimates per intervention</li> <li>• Feasibility study of the implementation of Photovoltaic Panels in some of the plants</li> </ul>	DAI
Aug-16 Nov-17	<p><b>Technical consultancy for project design and contract follow up – SWIM and Quality Control Program in South Lebanon.</b></p> <p>Sustainable Water Integrated Management (SWIM) Plan for South Lebanon Water Establishment (SLWE):</p> <ul style="list-style-type: none"> <li>• Preparation of a Water Management Plan for the Bent Jbeil Water Service Area</li> <li>• Mapping of the water supply components</li> <li>• Optimization of the use of water supply sources</li> <li>• Assessment of the design and functional challenges at the Taibe Pumping Station and Water Treatment Plant</li> <li>• Conducting trainings and workshops for SLWE staff on:               <ul style="list-style-type: none"> <li>- Mapping of water supply components using ArcGIS</li> <li>- Optimization tools for water supply</li> <li>- Operation and maintenance of Pumping Stations</li> <li>- Operation and maintenance of water treatment systems</li> </ul> </li> </ul> <p>Water Safety Improvement and Monitoring for South Lebanon Water Establishment (SLWE) and Litani River Authority (LRA):</p> <ul style="list-style-type: none"> <li>• Preparation of a Water Safety Plan for the Bent Jbeil Water Service Area using the WHO Water Safety Manual Guidance</li> <li>• Mapping of pollution hazards to water sources of the Bent Jbeil Water Service Area</li> <li>• Conducting trainings and workshops for SLWE and LRA staff on:               <ul style="list-style-type: none"> <li>- Water quality data analysis and presentation</li> <li>- Pollution hazard mapping and risk identification</li> <li>- Analytical testing of Total Organic Carbon, Coagulation jar testing, Chlorine demand/decay testing</li> <li>- Irrigation water quality and maintenance of irrigation canals</li> </ul> </li> </ul>	Action Against Hunger (ACF)
Jun-15 Apr-17	<p><b>Qadisha Valley Wastewater Project (Updating of Wastewater Master Plan, Preparation of a Feasibility Study, Scoping Report for Environmental and Social Impact Assessment)</b></p> <p>The update of the Sanitation Master Plan and the preparation of a feasibility and design of a wastewater treatment and collection network which included:</p> <ul style="list-style-type: none"> <li>• Data Collection and update of the Master Plan for the entire Caza of Bcharre comprising 22 villages.</li> </ul>	Agence Francaise de Developpement (AFD)/ Council for Development and



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	<ul style="list-style-type: none"> <li>• Collecting existing data and relevant documents.</li> <li>• Establishing a full survey for the entire area.</li> <li>• Updating the Sanitation Master Plan for the Horizon 2040.</li> <li>• Executing an area recognition, choosing WWTP locations and defining parcels to be expropriated.</li> <li>• Operating a measurement and Diagnosis campaign.</li> <li>• Performing a feasibility Study for every village and choosing adequate Wastewater Treatment process.</li> <li>• Designing 23 Wastewater Station of which 6 are mechanical and 17 reed bed treatment systems.</li> <li>• Designing primary and secondary sewerage in addition to house connections.</li> <li>• Designing lifting stations.</li> <li>• Preparation of tender documents for the each of the 21 WWTP and their related networks</li> </ul> <p>The Establishment of a scoping report for the ESIA</p>	Reconstruction (CDR)
Dec-15 Apr-17	<p><b>6 WWTPs in North Lebanon (Preparation of a Feasibility Study, Detailed Design and Tender Document)</b></p> <ul style="list-style-type: none"> <li>• The preparation of a feasibility and design of a wastewater treatment and collection network which included:</li> <li>• Collecting existing data and relevant documents about two village in each of Donnyeh, Koura and Batroun Cazas.</li> <li>• Establishing a full survey for the study areas.</li> <li>• Defining design criteria for the Horizon 2040.</li> <li>• Executing an area recognition, choosing WWTP locations and defining parcels to be expropriated.</li> <li>• Operating a measurement and Diagnosis campaign.</li> <li>• Performing a feasibility Study for every village and choosing adequate Wastewater Treatment process.</li> <li>• Designing 6 mechanical and reed bed treatment systems.</li> <li>• Designing primary and secondary sewerage in addition to house connections.</li> <li>• Designing lifting stations.</li> <li>• Preparation of tender documents for the each of the 6 WWTP and their related networks.</li> </ul>	Agence Francaise de Developpement (AFD)/ Council for Development and Reconstruction (CDR)
Oct-15 Apr-16	<p><b>Design for Water Management at "Etablissements Agricoles de Taanayel</b></p> <ol style="list-style-type: none"> <li>1) An assessment and identification of the domain <b>water rights</b></li> <li>2) The preparation of a feasibility and design of <b>water intake structure</b> which included an estimation of incoming water flows and identification of best water intake structure and location with an identification and estimation of possible losses through all channels and channels rehabilitation measures and elimination of bottlenecks, a design of supply water network and cost estimation and a preparation of tender specific design document including cost estimation, price schedule, technical specifications, as well as operation and maintenance costs.</li> <li>3) The preparation of a feasibility study of <b>raw water treatment plant</b>, proposition of various treatment processes which are compatible with water quality requirements with emphasis on the natural treatment</li> </ol>	Arc En Ciel

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	<p>technologies, evaluation of the chosen water treatment technologies and review of their advantages and limitations.</p> <p>4) The preparation of a feasibility study, a design and a cost estimation of a <b>treatment plant for the wastewater</b> generated from the different activities of the domain including: 1) municipal wastewater from the convent, the offices and visitors' toilets, 2) agricultural activities wastewater from bovine farm, 3) industrial wastewater from dairy production.</p> <p>5) The preparation of a feasibility and design of a <b>potable water treatment and distribution network</b> which included the estimation of water quality and quantity, the identification of potable water treatment technologies (filtration, disinfection), the analysis of alternatives and selection of the preferred water treatment technology and the design and cost estimation of the chosen potable water treatment and distribution network in addition of the preparation of a tender specific design document for these works including cost estimation, technical specifications, price schedule, operation and maintenance costs.</p>	
Nov-14 Apr-15	<p><b>Design of a Wastewater Treatment Plant in Al-Ammayer</b></p> <ul style="list-style-type: none"> <li>• Design of Al-Ammayer wastewater treatment plant to serve 17,000 residents.</li> <li>• Preparation of Process Design Report explaining the anticipated inflow characteristics and the required quality to be achieved under all operating scenarios;</li> <li>• Preparation of wastewater treatment plant drawings including General Arrangement Plan and P&amp;I Diagrams..etc;</li> <li>• Preparation of Tender Dossiers: it is prepared for wastewater treatment plant tendering based on FIDIC Conditions of Contract for Plant and Design-Build for Electrical and Mechanical Works and for Building and Engineering works Designed by the Contractor, 1st Edition 1999 (Yellow Book).</li> <li>• Cost Estimation: to ensure over-specification does not occur and out-turn cost estimate is within the available budget.</li> </ul>	United Nations Development Programme
Sep-11 Aug-17	<p><b>Technical Assistance in support for the South Lebanon Water &amp; Wastewater Project</b></p> <ul style="list-style-type: none"> <li>• support CDR and SLWE in successfully carrying out their tasks of managing the procurement, construction and operational stages of the South Lebanon (Sour) Wastewater Project;</li> <li>• Support CDR in meeting the conditions for disbursement of the EIB loan, as well as the reporting requirements; which includes assistance in procurement.</li> <li>• Support the municipalities within the project area to design, procure and construct the necessary connections between the new primary/secondary collector systems and the local tertiary sewer systems serving the households;</li> <li>• Support the institutional development of the SLWE, through advice and assistance for setting up a dedicated wastewater division, the recruitment and training of professional staff to manage the wastewater collection and treatment facilities in their areas of responsibility;</li> <li>• Provide training to SLWE staff in supervising and managing the completed wastewater facilities in their areas</li> </ul>	European Investment Bank (EIB)

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	of responsibility.	
Oct-09 Mar-13	<p><b>Flood Risk Management and Prevention in Baalback-Hermel</b></p> <ul style="list-style-type: none"> <li>• Collecting, providing, generating, preparing and Analyzing all needed meteorological, geographical and hydrological data for the target region including information about topography, soil types and characteristics, land cover, soil erosion sensitive areas and available climatic data</li> <li>• Assessing and studying the watershed that affects the Ras Baalback/Aarsal region, proposing appropriate flood management measures including hydraulic structures (ponds, canals and check dams) and preparing the detailed design and the specification of technical details for these structures.</li> <li>• Supervising the execution phase of all the flood management measures including field work and proposing technical measures and cost-estimates required for the maintenance and protection of the proposed flood management structures</li> <li>• Assisting the project team in capacity building (trainings or other) and awareness raising activities of target communities and the general public.</li> </ul>	United Nations Development Programme (UNDP)
Jul-18	<p><b>Technical Assistance in Designing PWWCs for Kurdistan Region Government</b></p> <p>KRG launched the corporatization of the water and wastewater sector, with the aim of converting the General Directorate of Water and Sewerage (GD W&amp;S) at the Ministry of Municipalities and Tourism (MMT) into separate, autonomous and regulated Public Water and Wastewater companies (PWWCs) owned by the Kurdistan Regional Government (KRG).</p> <p><i>Brief description of the provided services:</i></p> <ul style="list-style-type: none"> <li>– Review Policies, Strategic Context and National Goals</li> <li>– Review and Assess water/wastewater Management Systems</li> <li>– Review and Assess water, Technology, and Human resources</li> <li>– Review and assess Existing Sector Enablers</li> <li>– Synthesize water Sector sustainability and challenges</li> <li>– Articulate PWWCs Mandate and Governance Model Definition</li> <li>– Define institutional framework and governance models</li> <li>– Support in stakeholder engagement and participation in high level meetings</li> </ul>	INVENTIS
Jul-13 Feb-15	<p><b>Preparation of drought Vulnerability assessment study to develop Iraq National Framework for Integrated Drought Risk Management (DRM)</b></p> <ul style="list-style-type: none"> <li>• Inception Phase set the stage for the development of the DRM framework; includes Mapping Key Project Stakeholders and gathering the needed Data through stocktaking (ELARD sources from Iraq, Web, Iraq sources...) in order to conduct the initial vulnerability assessment.</li> <li>• Drought Vulnerability Assessment covered selected pilot areas decided on during the first workshop focusing on agriculture, natural ecosystems related to water resources, and social groups, including assessment of vulnerability at the institutional level.</li> <li>• A Draft Drought Risk Management Framework is prepared addressing the following:             <ol style="list-style-type: none"> <li>1. Governance structure for DRM</li> </ol> </li> </ul>	United Nations Development Programme (UNDP)

Duration	Assignment name/& brief description of main deliverables/outputs	Name of Client & Country of Assignment
	<ul style="list-style-type: none"> <li>2. Policy and legal framework enhancement</li> <li>3. Drought risk identification, impact assessment and early warning</li> <li>4. Drought awareness and knowledge management</li> <li>5. Drought mitigation and preparedness measures</li> <li>6. Resource Mobilization for DRM</li> <li>• Final Drought Risk Management Framework, aiming at better understanding of Drought and its impacts, having a political momentum, having a Task Force for the supervision of the plan development, assigning concerned Drought-Citizen groups, and devising a Drought Plan (Monitoring and early warning, Risk assessment and Management). This will assist both the community and the government to reduce the impacts of drought.</li> </ul>	
<p>Mar-14 May-15</p>	<p><b>Environmental and Social Safeguard Studies Lake Qaraoun Pollution Prevention Project</b></p> <ul style="list-style-type: none"> <li>• Preparation of Environmental and Social Management Framework (ESMF) using WB guidelines</li> <li>• Preparation of Resettlement Policy Framework (RPF)</li> <li>• Conducting retroactive assessment of four (4) existing wastewater treatment plants</li> <li>• Preparation of Environmental Management Plan (EMP)</li> <li>• Preparation of a Resettlement Action Plan (RAP)</li> <li>• Environmental and social baseline field surveys, interviews and other data collection methods</li> <li>• Organization and implementation of major participatory workshops</li> </ul>	<p>The World Bank (WB)/ The Council for Development and Reconstruction (CDR)</p>